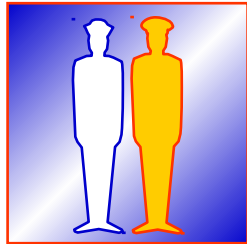


Sailor/Marine Career Management System



S&T Support to Sea Warrior



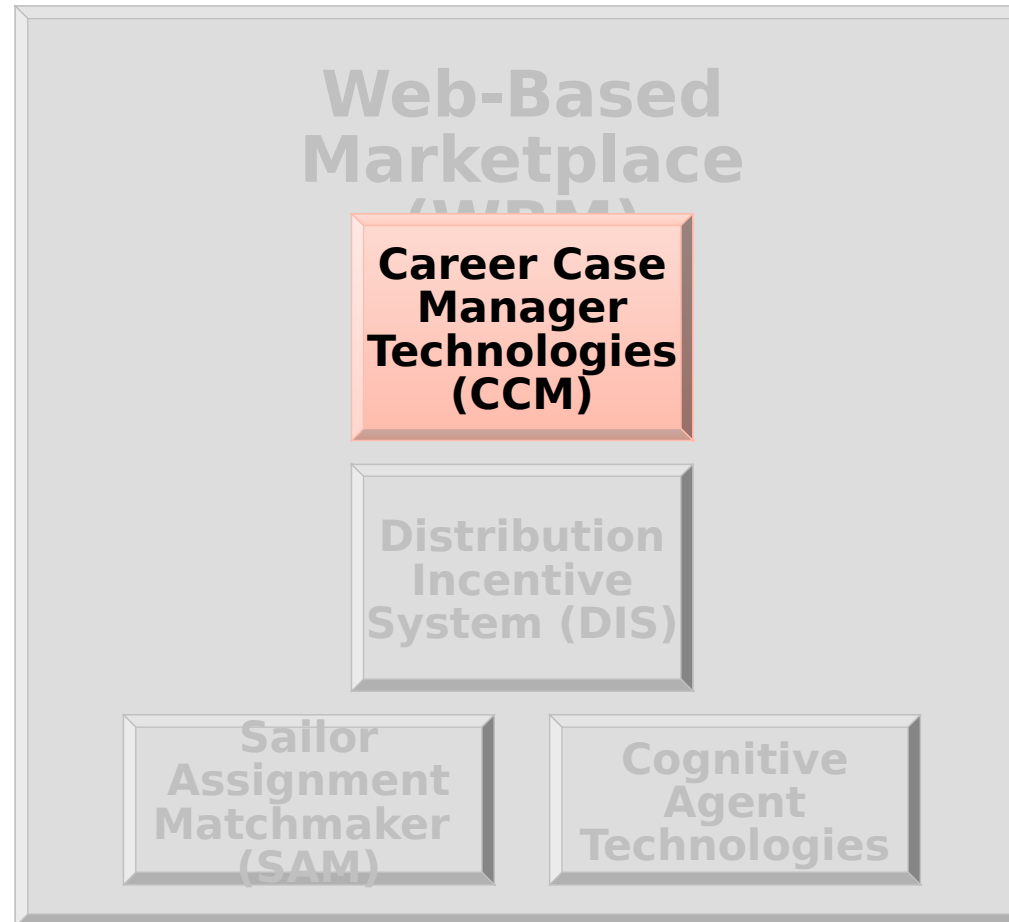
Sailor/Marine



Command



Policy Admin



The Research Problem & Situation: Career Case Manager Technologies



- **Sailors want to know the best path for:**
 - **Promotion**
 - **Education**
 - **Stability**
 - **to ensure a successful career**
- **Today rely on others' past experience, rumor, conjecture**
 - **Many “expert” opinions**
 - **Numerous data sources, limited connectivity**
- **No rigor in career planning**
 - **Impact morale**
 - **Guess work at “best” career choices**
 - **Bad choices often equal disappointment leading to decisions to leave**

Technical Objectives: Career Case Manager Technologies



- **Career Planning DSS with career choices and probabilities**
- **Integrate “skills objects” and training 5 VM**
- **Use historical data**
- **Develop computer-based probabilistic planning algorithms**
- **Use cognitive agents for heavy lifting**
- **Conduct laboratory and field tests of intelligent agent-based system.**

Technical Approach:

Career Case Manager Technologies



- **Propose Career Planning can be modeled using:**
 - Historical, stochastic information
 - Game-theoretic, network-based structures
- **Develop alternative structural models**
 - Comparing precedence models (path and network)
 - Integrate SKILLSNET career planning taxonomy
- **Apply alternative models to selected test cases**
 - Use historical and SME developed data
 - Compare error with selected actual data
- **Test alternative model(s) in laboratory with SME evaluations**
- **Test alternative model(s) with sample Service Community**

S&T Opportunities: Career Case Manager Technologies



- **Probability techniques must be stretched**
- **Techniques under consideration:**
 - Markov Chain
 - Game-theory
 - Bayesian Network
 - Probabilistic Dynamic Modeling
- **May require a combination of several**

Technologies to be Delivered:

Career Case Manager Technologies

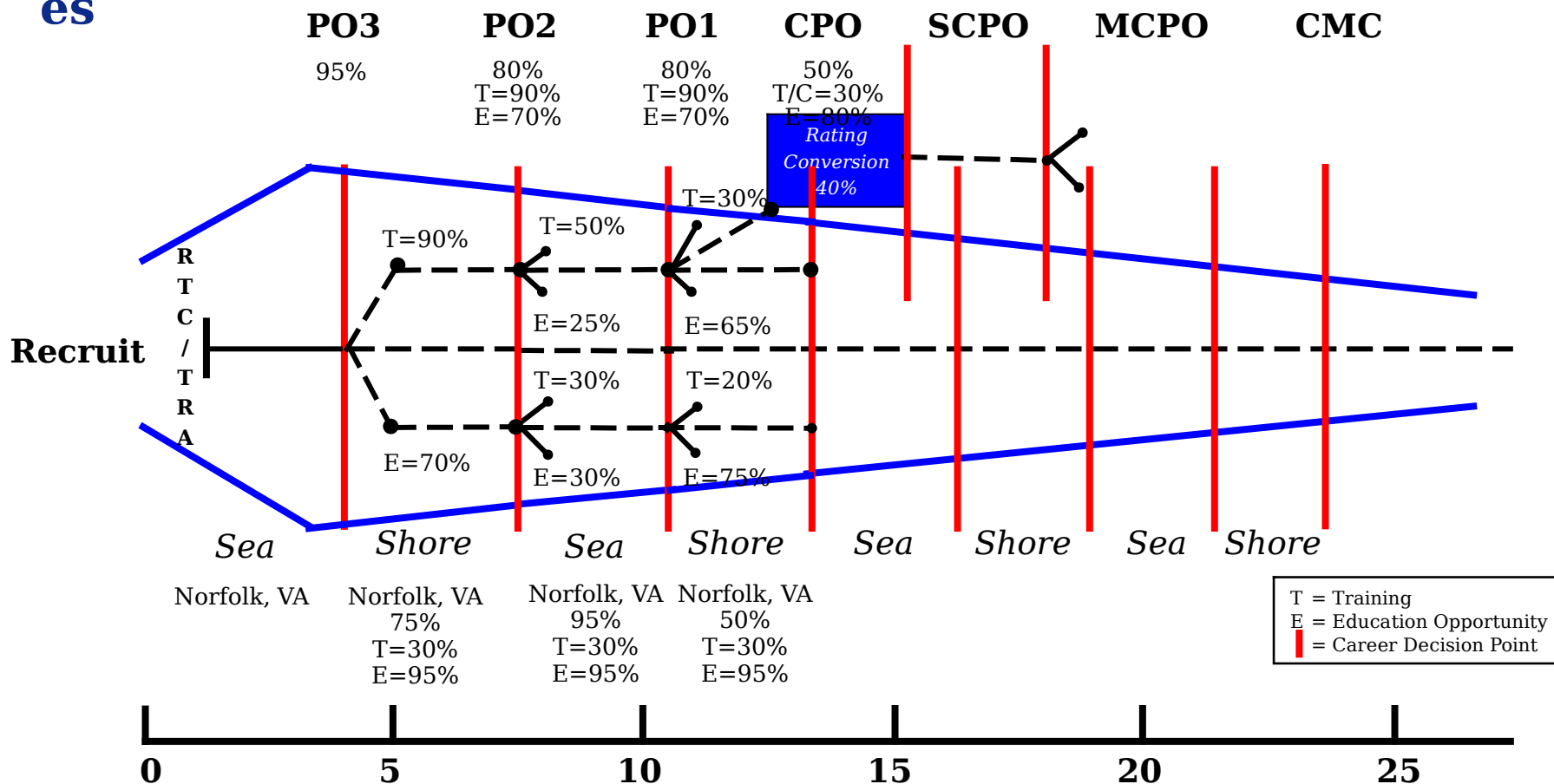


- **Web based DSS that provides visual display of career path options with user managed end-states and time horizons.**
 - **Promotion to X grade by X time in Service**
 - **Advanced training at X time in Service**
 - **Geographic location/specific job following next assignment**
 - **Education opportunity across X years.**

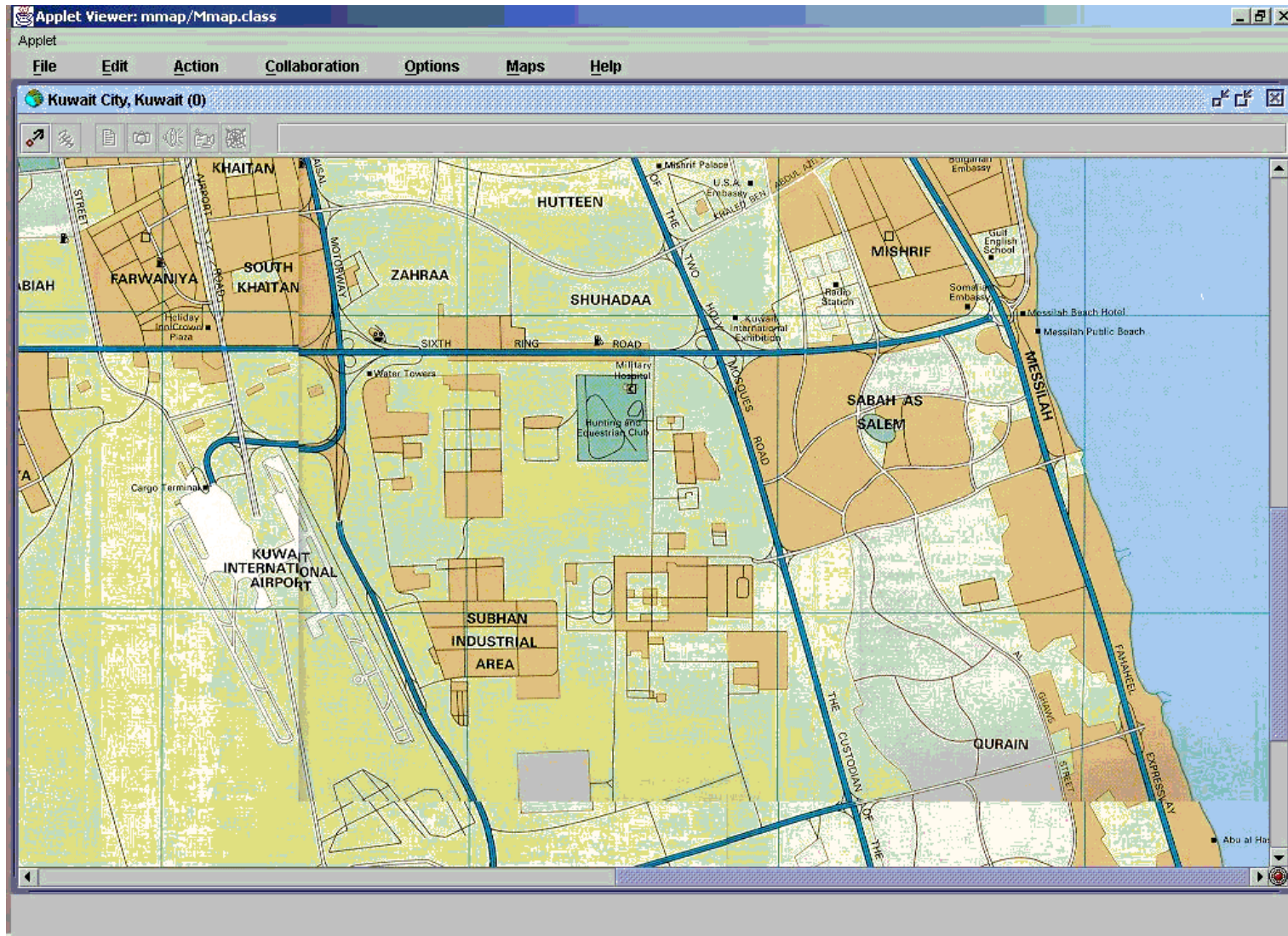
Technologies to be Delivered CCM Technologies



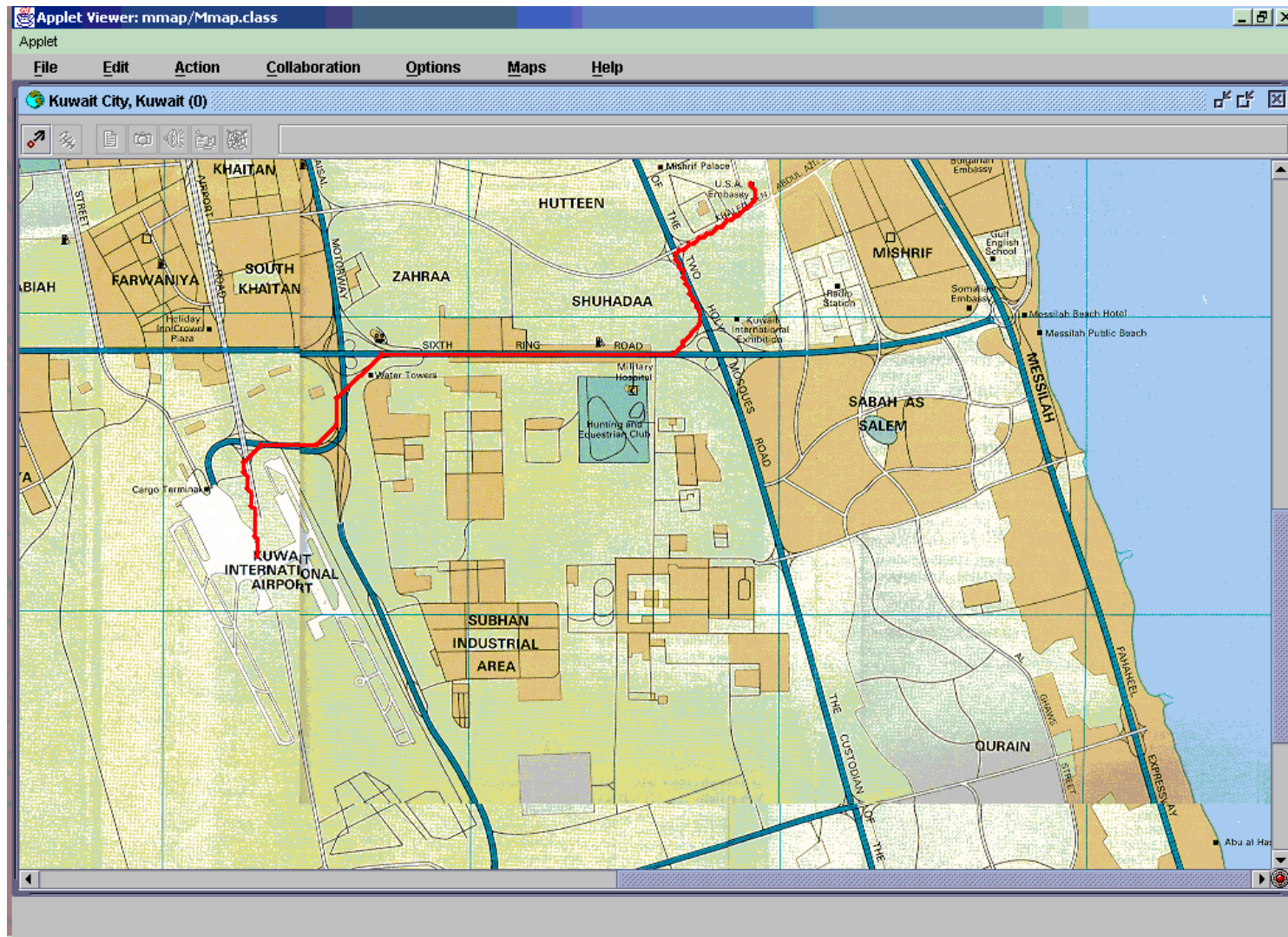
Complexities



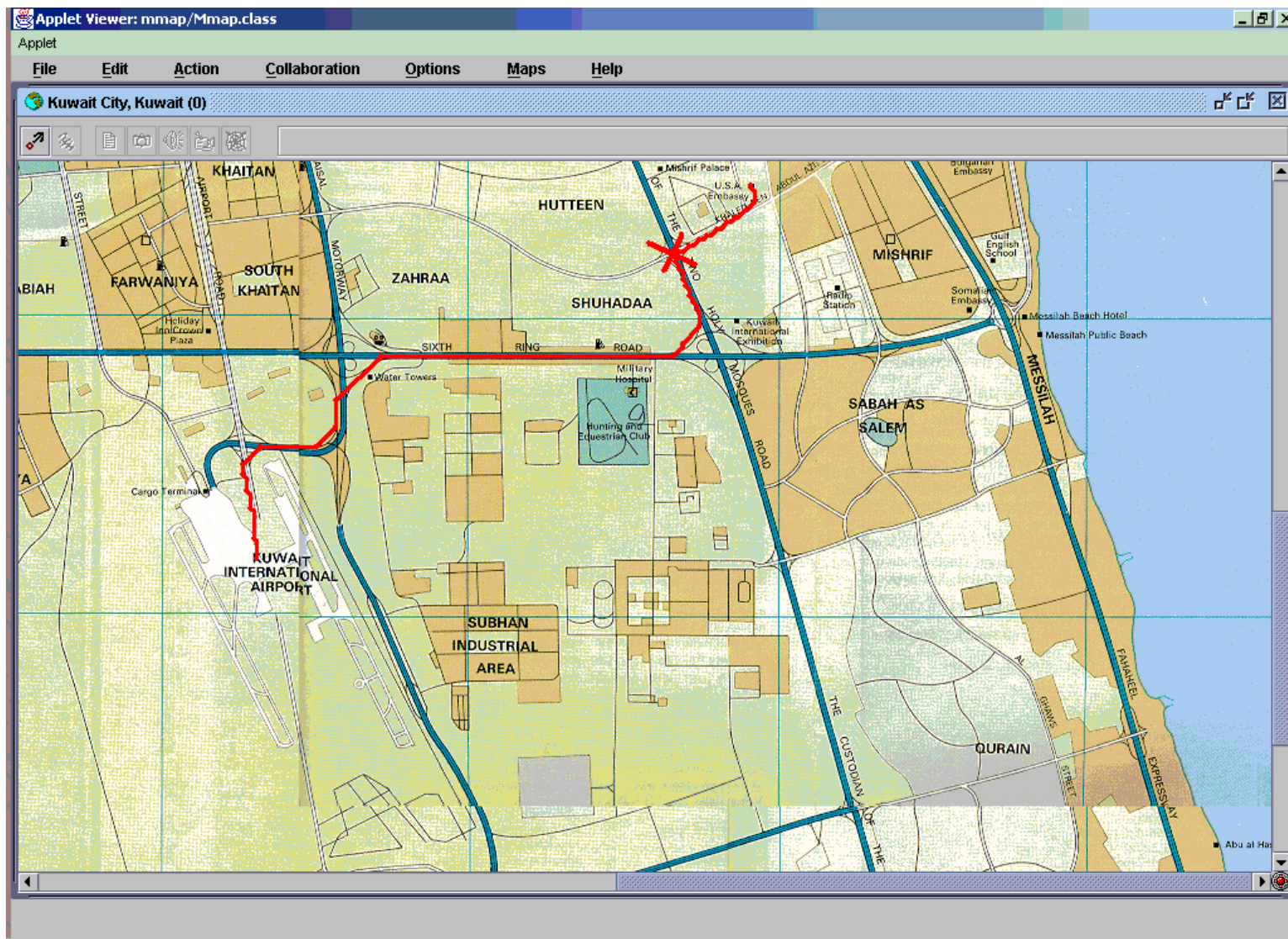
Potential Agent Technology application: CMU Route Planner



Evacuation plan - U.S. Embassy to Kuwait International Airport

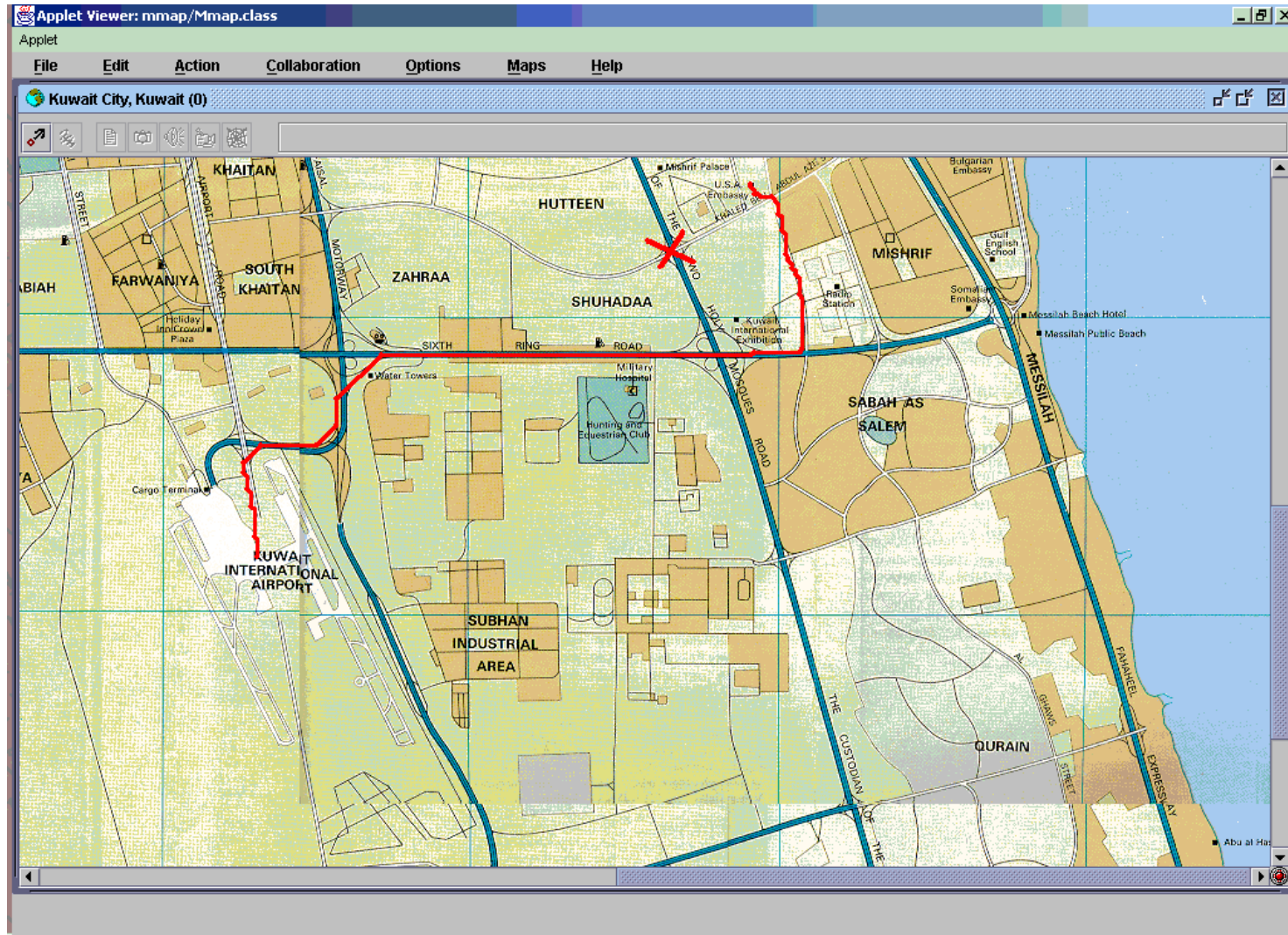


Roadblock, plan alternate route



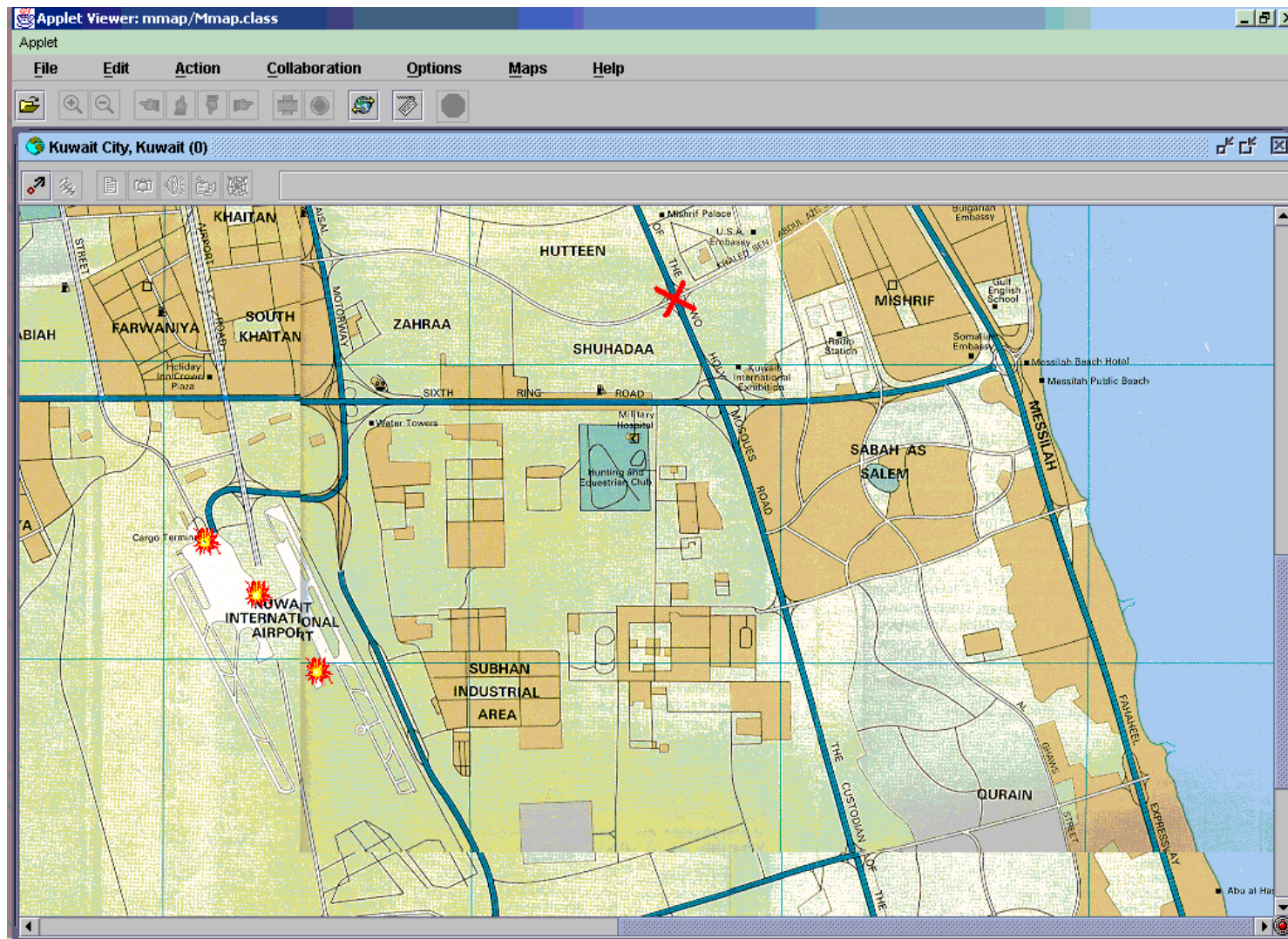
Applet started.

Alternate route



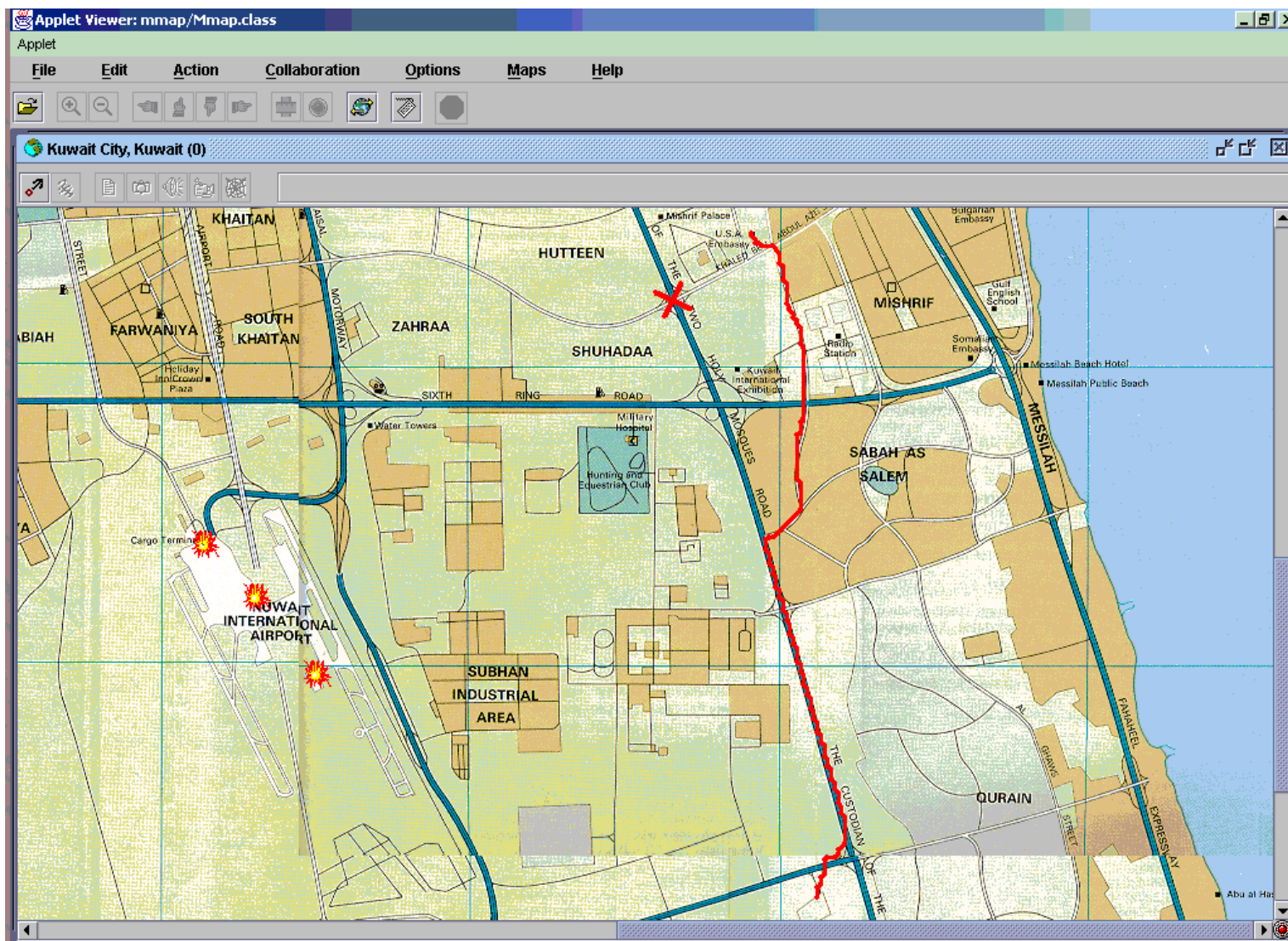
Applet started.

Bombing at Airport - plan alternative



Applet started.

Alternate evacuation route



Progress to Date:

Career Case Manager Technologies



- **New Start FY-03**
- **Ongoing literature review**
- **Discussions with**
 - **CMU**
 - **UMASS Amherst**
 - **Others planned**
- **Identified existing probability technique limitations**